FISHER m-SCOPE®

Impulse

Pulse Induction Metal Detector

Operating Manual

FISHER RESEARCH LABORATORY

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ABOUT YOUR DETECTOR

Fisher Research Laboratory has been producing rugged, high quality, high performance metal detectors since 1931, longer than any other company in the world. Your IMPULSE is a product of that proud heritage. Designed for deep-sea treasure hunting, the IMPULSE will also do the job in surf, on the beach, in fresh water or on land.

Pulse induction (PI) metal detectors have been around for years. Their ability to detect metal in black sand and salt water make pulse induction metal detectors particularly suited to underwater treasure hunting, wreck diving, shallow-water treasure hunting and beach combing. However, pulse induction metal detectors have had their drawbacks. Most have been heavy, expensive and unstable, requiring the operator to retune frequently. Pulse induction metal detectors also have had high battery drain, creating frustrating power loss and added expense.

But worst of all, pulse induction metal detectors have been plagued by slow response. Because the search coil is slow to respond to a target, sensitivity and depth can be maximized only at slow sweep speeds, forcing the operator to slow down, thereby covering less ground. "Autotune" pulse induction detectors do have a rapid response, but the search coil must be in motion to detect a target.

In 1985, engineers at Fisher Research Laboratory began work on a new pulse induction metal detector, one that would combine extreme depth in salt water with high battery performance, stability, low cost and fast target response. Their answer is the IMPULSE—a no-motion detector that responds instantly to targets and frees the operator to hunt fast, slow or with no motion at all. In addition, battery life of the IMPULSE has been greatly extended over previous pulse induction detectors. In fact, battery life of the IMPULSE is better than most induction-balance metal detectors. And stability is greatly improved. There's no need to retune the IMPULSE every few feet.

Here are some important features built into your IMPULSE:

1. LCD: A liquid crystal display gives a visual indication of signal strength; with a bar graph that climbs as the signal strength increases. The LCD also constantly monitors battery strength.

2. LED: A light emitting diode flashes when a target is located.

3. VCO Pinpointing: An audio signal tone increases in pitch and volume as the center of the search coil passes over the target.

4. Leak proof: The IMPULSE is leak proof to 250 feet.

5. Salt Water Operation: Salt water or wet sand is no problem for the IMPULSE. Its pulse induction technology virtually ignores salt water, making it the ideal underwater and beach-hunting machine.

6. Black Sand Operation: The IMPULSE penetrates black sand and some highly mineralized soils where ordinary detectors won't work at all.

7. No-motion Pinpointing: You can sweep the IMPULSE search coil, or hold it motionless over your target and still get a target response.

8. Target Response: Sweep your search coil fast, slow or not at all. The IMPULSE responds to targets no matter how fast or slow you sweep the search coil.

9. Spider Coil: The 8-inch, open-center Spider coil makes pinpointing easier. It's lightweight, tough, Electro-Static Insulated (ESI shielded) and 100 percent waterproof. Unlike most single-coil pulse detectors, the IMPULSE has a receiver coil in the center for easier and more accurate pinpointing.

10. Lightweight, Balanced and Comfortable: Only about 5 pounds total weight with a cushioned armrest and foam grip.

11. Hip-mountable: For almost effortless searching, the control housing slides off the handle and onto your belt.

12. Battery Life: About 40 hours on carbon-zinc batteries. Even more with alkalines.
13. All Metals: The IMPULSE detects all metals. It has no "discrimination" circuitry, which drastically reduces the ability of a pulse induction metal detector to detect gold and silver.
14. Easy to Use: Just pick it up, turn it on and adjust the TUNER control to the threshold level. You're ready to hunt.

CONDENSED OPERATING INSTRUCTIONS

Your IMPULSE is fairly simple to operate; however, its no-motion design makes it operate differently from more-common, VLF, induction-balance metal detectors. Therefore, even if you are an experienced detector user, we strongly recommend that you read this entire manual before starting. But if you just can't wait, here are some quick instructions to get you going on land.

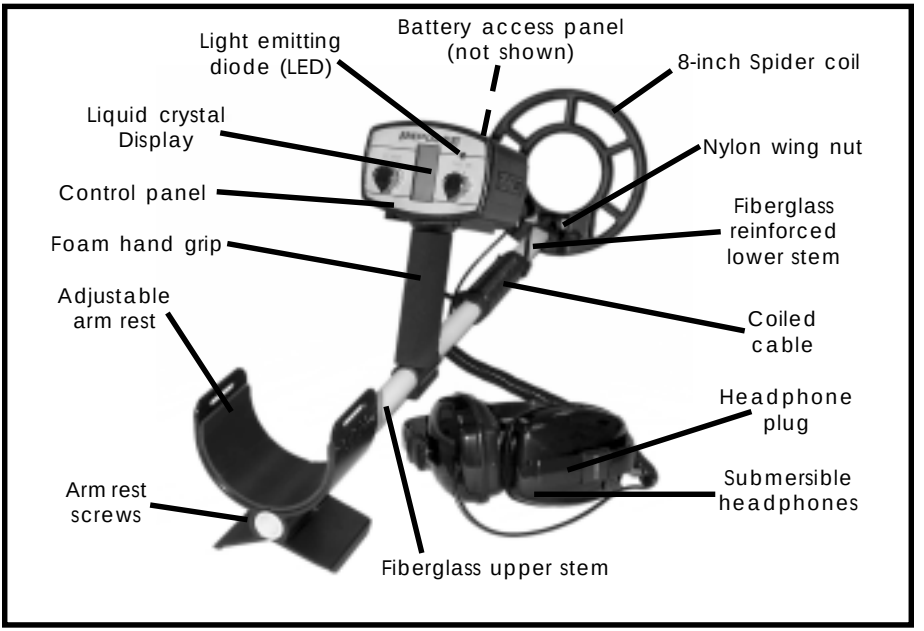
1. Hold the coil up and away from any metal.
2. Set the tuner full counter clockwise, just before it clicks into the "BATT TEST" position.
3. Set the VOLUME control knob to "10."
4. Hold the search coil 1 to 2 inches above the ground and adjust the TUNER control knob until the audio tone can just barely be heard (usually one or two bars on the LCD).
5. Readjust the volume control to a comfortable level, when the search coil is passed over a large target.
6. You're ready to go. Walk slowly and keep the coil close to and parallel to the ground.
7. To pinpoint a target locate the spot where the volume and pitch of the audio signal peak. The LCD signal-strength meter will also peak when the center of the search coil is directly over the target.
8. To pinpoint the target more precisely, detune

the detector by readjusting the TUNER control counter clockwise. This will reduce the sensitivity of the search coil until only the center, or hot spot, responds to the target.

9. Retune your IMPULSE before resuming your search.

10. Good Hunting!

ASSEMBLY



Fisher M-Scope IMPULSE pulse induction metal detector.

Your Fisher IMPULSE requires very little assembly. Unpack it carefully and save the carton, which may come in handy for future storage or shipment.

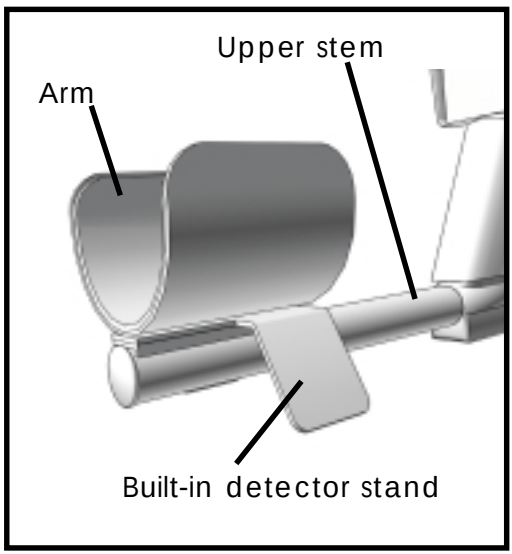
1. Remove the headphone, handle and search-coil assemblies from the carrying case. Be careful not to damage the foam-rubber inserts or put any strain on the cable connections.

2. Adjust the lower stem to the approximate length you will be using; extended for stand-up use or as short as possible for diving. To extend the lower stem, push in the spring lock, pull out the lower stem and let the spring lock snap into another hole.

3. If you will be using the IMPULSE on the handle and not body mounted, wind the search coil cable around the handle assembly as shown in the illustration above. Secure the cable with the two Velcro straps included with your IMPULSE. Make sure there is some slack at the control-housing end and enough at the other end to attach the search coil.

4. Remove the Delrin bolt and nylon wing nut from the search coil. Line up the hole in the lower stem between the two holes in the search coil "ears". Attach the coil to the stem with the bolt and wing nut and finger tighten.

5. The armrest may be repositioned for maximum comfort by removing the armrest screws, sliding the armrest to the next screw hole and reinstalling the arm-rest screws.



The arm rest can be repositioned by readjusting two screws on the upper stem.

SETTING UP

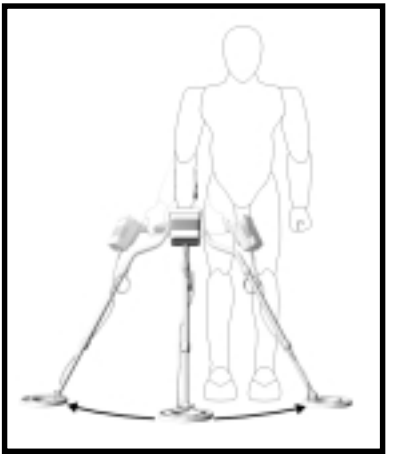
FOR LAND OR SHALLOW WATER

Put the headphones around your neck to keep them out of the way while making the following adjustments:

1. Adjust the stem length and coil angle so the search coil rests flat on the ground about 6 inches in front and slightly to the right of your right foot (to the left of your left foot if you're left handed). Your arm should be straight and relaxed with the handle grip held firmly but comfortably. Remember, as you increase the shaft length, you also increase the strain on your wrist and arm. The IMPULSE is balanced for comfortable searching in a tight semicircle around the front of the operator.

2. Leave enough slack in the coil cable to allow the coil to swivel as far as it can in either direction. The coil wing nut should be tight enough to prevent the coil from moving.

3. You should now be able to move into your "search" position by leaning slightly forward and raising the search coil approximately 2 inches above the ground. Your arm should still be straight and the coil should be parallel to the ground, about 12 inches in front of your foot. The coil angle may have to be slightly readjusted at this point.



When searching on land or in shallow water, keep your arm straight and your search coil no more than 2 inches above ground.

FOR DIVING

Unlike induction-balance metal detectors, the IMPULSE ignores the disruptive influences of salt water and black sand. This capability, along with its deep-seeking sensitivity to iron, makes it ideal for underwater treasure hunting and wreck diving. The IMPULSE is also waterproof to a depth of 250 feet. Remember, always practice safe diving methods.

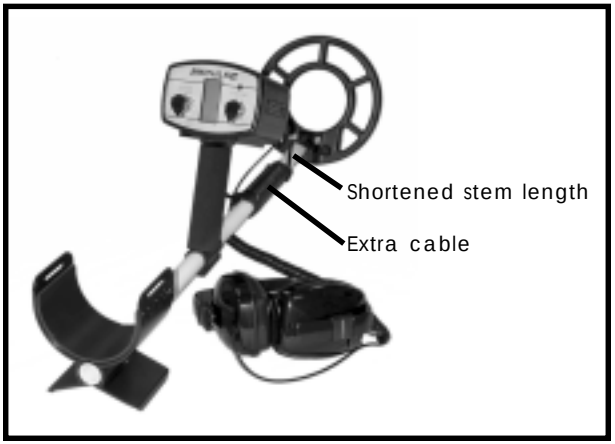
Caution: *Hipmounting the IMPULSE control housing is not recommended for underwater use. The search coil cable may become entangled with a submerged object, making it difficult for the diver to resurface quickly in case of emergency.*

1. Adjust the stem length as short as you can without having the search coil detect your diving gear.

2. Adjust the search coil parallel to the seabed, river or lake bottom.

3. Make sure extra cable is coiled tightly on the upper stem as closely as possible to the control housing, with just enough slack near the search coil to allow it to swivel as far as it can in either direction. Extra cable near the search coil may generate false signals.

4. Remove the tethered earphone plugs for rapid pressure equalization as you dive and return to the surface.



When diving with your IMPULSE, use the shortest possible stem length, with the extra cable wrapped tightly around the stem, as close as possible to the control housing.

FOR HIPMOUNTING

For almost effortless treasure hunting, the control housing is easily removed from the handle and attached to a belt clip. "Hipmounting" the IMPULSE in this manner takes half the weight off the handle and allows the land or shallow-water Treasure Hunter to search much longer without arm fatigue.

1. Grasp the handle grip firmly with one hand and the control housing with the other.
2. Slide the control housing off the mounting bracket by pulling it toward you.
3. Slide the belt clip into grooves on the bottom of the control housing. This is a snug fit, and you'll have to bend the belt clip slightly.
4. Unwrap just enough of the coil cable to allow for searching.
5. Slip the control housing onto your belt, left side for right-handers, right side for left-handers.

NOTE:

Because of the extreme sensitivity of the IMPULSE search coil, hipmounting the control housing may produce a false signal when the search coil reaches the end of its arc (on the side that the control box is attached to your belt). Depending on your stem length and how high you have the housing hip mounted, the search coil may actually detect the housing.

A. Remove the control housing.
B. Slip the belt clip to the underside of the control housing.
C. Slip the control housing onto your belt.

You can hipmount your IMPULSE by sliding the control housing off the handle and attaching it to your belt. This reduces the weigth of the stem, creating nearly effortless hunting.

CONTROL PANEL

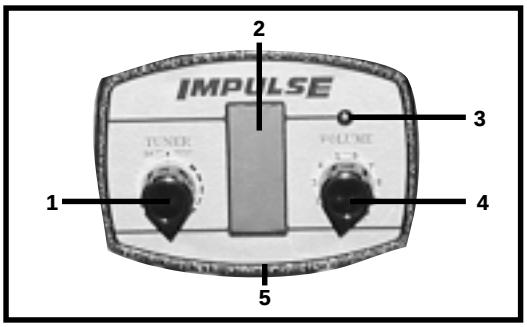
1. TUNER/BATT TEST CONTROL: Tunes the detector to its maximum sensitivity by adjusting the "threshold level" to a faint tone. Also, when turned to BATT TEST position, signals condition of batteries with audio tone and LCD bar graph.

2. Liquid Crystal Display: LCD gives a continuous, visual check of battery condition and provides a visual display of signal strength. A bar graph rises with an increase in signal strength and falls with a decrease in signal strength. The bar graph also indicates the approximate strength of the batteries when the tuner is in the BATT TEST position. A full-scale reading of the bar indicates fully charged batteries, while just a few bars means the batteries are getting low. And when there's only a couple or no bars remaining, it's time to replace the batteries. Also, at this point, "BATT OK" is replaced by a flashing "LO BATT." NOTE: Always remove your headphones or turn down the volume before clicking into the BATT TEST position.

3. Light Emitting Diode: LED flashes red when a target is detected or the batteries are being tested.

4. VOLUME CONTROL: Adjusts volume of audio headphone signal. The OFF position turns detector off.

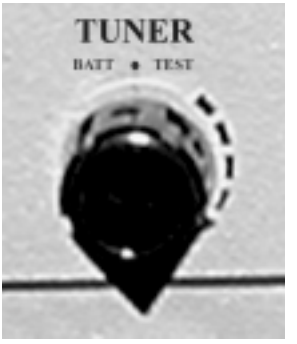
5. STEM MOUNT: Bottom of control housing slides into mount on stem handle, providing easy detachment of the control housing for hip-mounting.



The IMPULSE offers the user three different target signals: an audio target response, a large LCD bar graph and a bright, red LED.

TUNING

Tuning your IMPULSE is a simple but necessary step before beginning your search. If you're hunting underwater, the following steps should be performed underwater.



The TUNER control Knob must be adjusted before starting your search

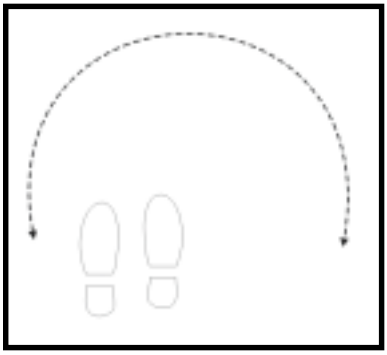
1. Hold the coil up and away from any metal.
2. Set the tuner full counter clockwise, just before it clicks into the "BATT TEST" position.
3. Set the VOLUME control knob to "10."
4. Hold the search coil 1 to 2 inches above the ground and adjust the TUNER control knob until the audio tone can just barely be heard (usually one or two bars on the LCD). Then fine-tune it just a little bit louder than a faint tone (usually about two bars).
5. Readjust the volume control to a comfortable level when the search coil is passed over a large target.
6. You've now tuned your IMPULSE to its proper "threshold tone" and you're ready to begin searching. When you move from dry sand to wet sand, or as ground mineralization or temperature changes, you will have to readjust your tuner slightly to maintain your threshold setting.

SEARCHING

FOR LAND OR SHALLOW WATER

Using good search techniques is every bit as important as having a good detector.

1. Make sure your IMPULSE is properly tuned (see Tuning, above) and the VOLUME control is adjusted before beginning your search.
2. Begin by walking slowly, keeping the search coil as close to the ground as possible.



When the stem length is properly adjusted the IMPULSE is balanced for sweeping in a tight semicircle. Wide to the right for right handers. Wide to the left for left handers.

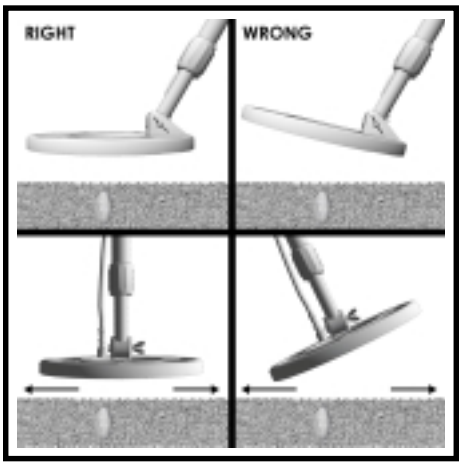
Be sure to overlap your sweeps.

3. Walk slowly and sweep the search coil in a tight semicircle, keeping the coil parallel and as close to the ground as practical.

4. The IMPULSE has three signals that alert you to a target: 1) an audible tone, 2) a meter that measures signal strength and 3) a flashing red light. Listen intently for the IMPULSE audio signal tone. The tone increases in volume and raises in pitch when directly over the target and decreases in volume and lowers in pitch when moving away.

5. Overlap your sweeps by at least 50 percent. Remember that your coil's depth penetration is conical, and if you don't overlap each sweep you'll miss the deeper targets.

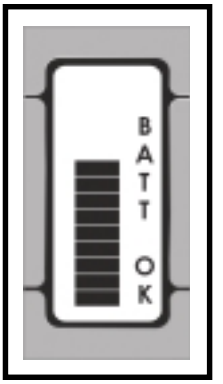
6. Search in a methodical manner. Pay close attention to where you're going and where you've



Be sure to keep the search coil parallel and close to the ground at all times.

been.

7. Take your time. If you walk too fast you can't overlap your sweeps, and you'll miss a lot of ground.



The LCD indicates signal strength and continuously monitors battery conditions.

NOTE:

Your threshold tone will probably go up and down as you search. This is a perfectly normal response since the distance between your coil and the ground varies as you sweep the coil back and forth. You may want to readjust your threshold level slightly to maintain a comfortable "average" threshold volume. You will also have to readjust it if the ground mineralization changes sufficiently or if you enter or leave wet sand.

UNDERWATER

The IMPULSE is waterproof to 250 feet, and it operates the same underwater as on land. However, some differences in search technique should be noted.

1. Tune your IMPULSE underwater, on the bottom. You may want to run your threshold tone and volume slightly higher than you would on land. If you're wearing a hood, you'll probably have to turn the volume control to maximum.

2. Keep the coil as far away from you (and your dive gear) as possible. Sweep the search coil back and forth in a wide semi-circle in front of you to cover the bottom in a methodical manner.

3. Keep the coil parallel and as close to the bottom as possible. Overlap your sweeps at least 50 percent.

4. Because your IMPULSE is a no-motion detector, you can detect buried metallic objects in cracks, crevices and out-of-the-way places without

having to move the coil back and forth.
5. Remember, observe all the rules of safe diving.

NOTE:
Your threshold tone will probably go up and down as you search. This is a perfectly normal response since the distance between your coil 'and the bottom varies as you sweep the coil back and forth. You may want to readjust your threshold level slightly to maintain a comfortable "average " threshold volume. You will also have to readjust it if the ground mineralization changes sufficiently.

Divers can sweep the IMPULSE search coil in a wide semicircle to methodically cover a large open area, or probe cracks and crevices with the search coil using no motion.

PINPOINTING

Pinpointing your target with the IMPULSE is relatively simple, but it will take some practice.

1. Make sure your IMPULSE is in tune. (See p. 10, Tuning, if you need to tune your IMPULSE.)
2. Locate a target and pass the search coil over it. You should notice three things from your IMPULSE: 1) The red LED flashes, indicating a target, 2) The LCD signal-strength bar graph climbs, peaking when the coil is directly over the target and 3) an audible tone is heard, increasing in pitch and volume as the search coil passes over the target.

3. Sweep the coil over the target, side-to-side and front to back, to find the spot where the bar graph peaks and the signal tone is loudest and highest. Because the scan area of pulse-induction metal detectors is fairly wide, further pinpointing may be required, especially on large or very shallow targets.

4. Readjust the TUNING control slightly counterclockwise, throwing the instrument slightly out of tune below the audio threshold point. When the IMPULSE is detuned, the sensitivity of the coil is decreased.

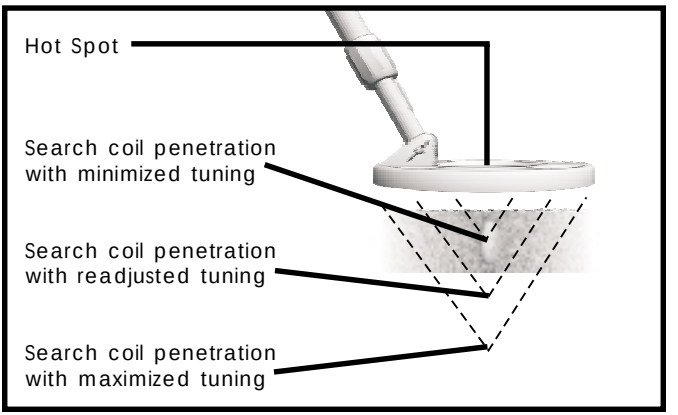
5. With your IMPULSE slightly detuned, sweep the search coil over the target again. You'll notice that the target area has shrunk.

6. Continue to detune your IMPULSE until only a slight signal is heard when the coil is passed over the target.

7. With the IMPULSE set to this minimum-tune mode, only the center of the coil, or hot spot, will respond to the target, pinpointing the target location.

8. Another way to pinpoint large and/or shallow targets is to simply lift the search coil until only a faint, narrow target response is heard.

9. After digging the target, retune your IMPULSE before continuing.


Hot Spot
Search coil penetration with minimized tuning
Search coil penetration with readjusted tuning
Search coil penetration with maximized tuning

Pinpointing with the IMPULSE no-motion detector is accomplished by adjusting the tuning so that only the center of the search coil remains sensetive to the target.

TARGET RECOVERY

Once you've identified and pinpointed a target, your objective is to recover it quickly and neatly, leaving virtually no trace of your excavation. There are almost as many ways to do this as there are treasure hunters. Whatever works for you is good enough as long as you don't break any laws, damage vegetation or leave uncovered holes.

Generally speaking, beachcombers do little if any damage to the environment while recovering targets. However, if you plan to use your IMPULSE on lawns or in parks, your target recovery method can be very important. Two of the most successful methods are illustrated in a separate booklet enclosed with your IMPULSE.

Reminder: *Whichever method you choose, remember that responsible treasure hunters take pride in their ability to leave soil and vegetation intact and undamaged.*

RECOVERY TOOLS

1. Sandscoops designed especially for beachcombers and shallow- water treasure hunters are available at metal-detector outlets.

2. Divers use a variety of recovery tools, depending on the condition of the seabed or lake bottom. A sturdy dive knife will suffice in packed mud or small rocks. Most divers prefer to use their hands in loose sand.

Professional treasure hunters often use an air hose fed by a surface compressor to blow away loose sand, gravel or mud.

3. For land recovery, a sturdy hunting knife with a 5-inch blade will suffice in most soils. A high quality, double-edged "survival" knife is an even better choice (and more expensive) because it will be almost impossible to bend or break.

CAUTION: *Using a jack knife without a locking blade is a good way to lose a finger.*

4. A heavy duty, blunt screwdriver is commonly used for shallow targets where digging or "plugging" are objectionable.

OPERATING TIPS

1. Keep the search coil cable wound snugly around the stem when diving around coral or jagged rocks to keep it from snagging.
2. Divers should make sure the drain holes in the headset are unobstructed. Better yet, wait until you're on the bottom before putting your headset on, and take it off before surfacing.
3. Divers should also keep the search coil at least 2 feet away from their bodies. Metal gear (weights, gauges, tanks, etc.) will be detected by the IMPULSE if held too close.
4. Practice pinpointing. There's nothing sacred about the method described in this manual. Many IMPULSE users have developed their own pinpointing methods.
5. If you're wading or hunting on land, hold your digging tool behind your back or above your waist. Your IMPULSE is sensitive enough to sound off each time the coil gets near it.
6. Don't waste a lot of time digging holes for targets you can't find. If your hole keeps getting deeper and wider, cover it up and go on. You may be over a buried pipe or some other large, deep target. (However, if you're looking for a deep target, keep digging.)
7. If you're looking for large, shallow targets, detune your IMPULSE slightly below threshold. You'll pass right over a lot of small trash this way, but you won't miss items capable of producing a strong target signal.
8. Good things often come in two's or even three's. Once you've recovered a good target, always recheck the hole for a second signal and carefully search the immediate area by searching slowly around the hole two or three times, slowly increasing your search area. Always dig every suspicious sound in the vicinity of a good find.
9. Recheck your hole even if your find was trash.

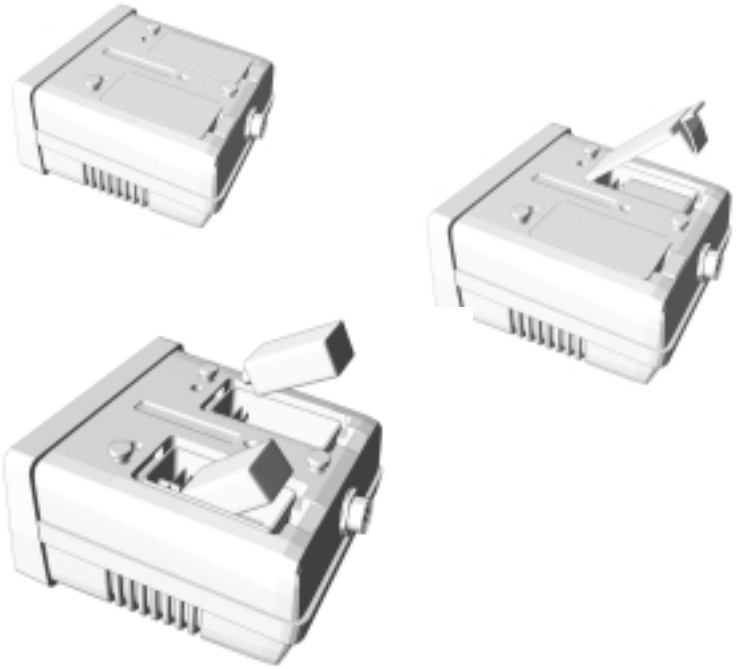
Good targets are often found beneath bad ones.

10. Practice. Practice over known targets. Practice tuning. Practice pinpointing. Reread the appropriate part of this manual if you're having problems.

BATTERIES

Eight AA batteries located in the rear section of the control housing power the IMPULSE. The batteries are sealed off from the electronics so that accidental water leakage into the battery compartment will not damage the circuitry. To replace the batteries, remove the battery access panel:

1. Remove the battery cover by partially unscrewing the two, knurled thumbscrews with a coin or screwdriver. (The knurled knobs are



"captive screws" and do not have to be completely removed from the battery cover.)
2. Remove the battery pack from the Control Housing and disconnect the battery lead connector. Be very careful not to put any undue strain on the battery leads.
3. Remove the batteries from the battery packs. Note the polarity markings inside the pack and install fresh batteries. You may use regular carbon zinc, alkaline or rechargeable Nicads.
4. Reconnect the battery lead.
5. Insert the battery pack into the Control Housing with the lead connector on top. Fold the leads across the top of the pack.
6. Make sure the O-Ring and both sealing surfaces are clear before reinstalling the battery cover. THIS IS EXTREMELY IMPORTANT!
7. Finger tighten the thumbscrews, and then carefully tighten again 1/4 turn with a coin or screwdriver.

HOME RECHARGER

Recharging Nicad batteries with the optional 110-volt recharger is a simple procedure:

1. Remove and disconnect the Nicad battery pack from the IMPULSE Control Housing.
2. Connect the recharger battery lead to the battery pack.
3. Plug the recharger into a wall outlet, and the batteries will begin recharging immediately.
4. The small, green light in the charger will stay on during the entire charge cycle, indicating that all connections have been made and the charger is working.
5. A full charge will take about 24 hours. Do not charge more than 48 hours.

AUTO RECHARGER

The complete IMPULSE recharge kit (optional) includes one battery pack, eight Nicad batteries, one 110-volt, 60-cycle home recharger and one 12- volt, negative-ground, auto cigarette lighter recharger. The 12-Volt Recharger offers a method to recharge your nicad batteries while on the road.

1. Remove and disconnect the Nicad battery pack from the Control Housing.

2. Connect the cigarette lighter recharger battery lead to the battery pack.

3. Plug the recharger into the cigarette lighter socket, and the batteries will immediately begin recharging.

4. The small, green light may glow briefly if the batteries are completely dead and the engine is running. Normally, it will not glow at all.

5. An overnight charge with the engine off may give only 6 to 8 hours of battery life. A full charge may take as long as 48 hours (less with the engine running). For this reason, the Auto Charger may best be used for occasional "Booster" charges (see Tips).

6. Do not charge over 48 hours.

TIPS ABOUT NICAD BATTERIES

Nicad batteries may accept as many as 1,000 recharges; however, they have some limitations.

1. Nicad batteries will only last about half as long as standard carbon-zinc batteries before recharging is required.

2. Nicad batteries may develop a "memory" if you give them repeated "booster" charges. In other words, if you charge your Nicad batteries over and over again for only three 3 hours at a time, the batteries will eventually only hold a 3-hour charge.

3. Nicad batteries may reverse polarity if discharged too low and refuse to recharge. Don't leave your detector turned on, and don't continue to operate it after the "LO BATT" indicator starts flashing.

MAINTENANCE

Your IMPULSE doesn't require a lot of care. It's built with high quality materials, and it's waterproof to a depth of 250 feet. But there are a few things you should do to keep it in peak operating condition.

STORAGE

1. If you're not going to be using it for a while, take the batteries out. Acid damage caused by leaking batteries can be severe.
2. Avoid extreme temperatures. Don't leave it inside a closed car sitting in the sun or even worse, in the trunk of a car.

CLEANING

1. Sand and dirt between the coil "ears" and lower stem will literally grind away the ears and stem.
2. The headphone ear pads may be removed, rinsed and squeezed out to remove any seawater salt build-up. Rinse out the cups as well.
3. Sand, silt or fine dirt between the upper and lower stems will cause the lower stem to freeze up. Rinse frequently.
4. Rinse the area under the two knobs on the control panel thoroughly after use.
5. Always clean and dry the area around the battery-cover seal before opening.

BATTERY COMPARTMENT

1. Remove the battery cover and check for water after each use.
2. Keep the sealing surfaces of the battery cover and control housing clean and free of scratches and nicks. Remove the O-ring from the cover occasionally and apply a very thin coat of clear silicone grease or Vaseline.

TREASURE HUNTER'S CODE OF ETHICS

LETS PRESERVE OUR TREASURED SPORT!

Laws governing the use of metal detectors are becoming more and more common. In many countries, the use of metal detectors is illegal or severely restricted. Don't let this happen in your area.

ALWAYS get permission to hunt on private property.
ALWAYS leave a site cleaner than you found it. Take at least some trash with you or, if you can, take it all.
ALWAYS fill in your holes neatly whether you're in a city park or remote wildernessness. Leave the land as it was before you disturbed it.
ALWAYS obey all laws relating to Treasure Hunting.
ALWAYS return valuable property if you can locate the original owner.
ALWAYS do whatever you can to give the hobby of Treasure Hunting the good image it needs and deserves.

Where To Use Your Metal Detector In The U.S.

National Forest and Federal Lands—Metal detecting is allowed only by special permit acquired from the federal government. Each area has a district office.

Corps of Engineers, Lakes, Shorelines and Lands—Permission has been granted only on predisturbed sites, such as beaches and attached swimming areas. New Corps lakes and lands must be okayed by the main office of the Army Corps of Engineers. Each area has a district office.

State Parks and Lands—Some state parks are open to metal detecting, but some are not. Always check with the park ranger before attempting to use your detector.

Bureau of Land Management (BLM) Lands—Some areas are open for metal detecting, and some are not. Always check with the district office.

City or County Park Lands—Most are open to metal detecting unless notice is given by a sign or city ordinance. When in doubt, always check with the city's Parks and Recreation Department.

Public School Grounds—Most are open to metal detecting unless notice is given by a sign, city ordinance, law enforcement official, or school employee. You should always check with the school office first.

Privately Owned Lands (Private Property)—Permission required. And it is always best to have the permission in writing.

Historically Marked Lands or Sites—Metal detecting is not allowed. Don't even think about it.

SPECIFICATIONS

	8" Coil	10 1/2" Coil
Length Extended		50"
Collapsed		31"
Weight Complete (with Headset)	5.2 lbs.	5.5 lbs.
Handle and Search Coil	2.3 lbs.	2.6 lbs.
Control Housing	2.4 lbs.	2.4 lbs.
Transmit Frequency	5,333 pulses per second, crystal controlled	
Audio Target Response (Headset)	VCO	
Visual Target Response		
	1. LED	
	2. LCD bar graph	
Headset	Waterproof, Piezo Electric	
Interchangeable	No	
Ground Balance Required	No	
Search Motion Required	No	
Detachable Control Housing for Hipmounting	Yes	
Salt Water/Fresh Water Operation	Yes	
Land Operation	Yes	
Submersible	to 250 feet	
Search Coil Type	Dual Spider coil, (noninductive- balance)	
Diameter	8" or 10 1/2"	
Shielding	100% ESI	
Interchangeable	No	
Batteries	(8)1.5-Volt, AA penlight	
Battery Life	Carbon Zinc	40-50 hours
Alkaline	100+ hours	
Nicads	20-25 hours	
Automatic Battery Check	Yes	
Operating Temperature	32-120°F	
Warranty	Limited Lifetime Warranty	

NOTES

1. Subject to modification without notice.
2. Approximate.
3. VCO: Voltage Controlled Oscillator. Volume and frequency increase as target is approached.
4. LED: Light Emitting Diode. Bright red light.
5. LCD: Liquid Crystal Display. Bar graph displays signal strength and battery condition.
6. ESI: Electro-Static Insulated to reduce certain types of false signals.
7. The length and terms of the warranty will vary outside the U.S. Check with your distributor for details. Fisher Research Laboratory does not warrant suitability to specific use. Fisher Research Laboratory shall in no event be liable for any direct, incidental, consequential or indirect damages.

FISHER m-SCOPE®

QUALITY

Fisher detectors are renowned for their quality.
Each detector is hand crafted in the USA with pride

PERFORMANCE

Treasure Hunters worldwide rely on Fisher.
Our detectors are durable, dependable, and search deeper..

REPUTATION

Fisher produced the first patented metal detector in 1931. For over 70 years, the Fisher logo has been a mark of excellence.

LIFETIME WARRANTY

Fisher believes in the products we produce and backs this belief with a lifetime warranty, the best in the industry, on all of our consumer detectors. Warranty may vary outside of the United States. See your dealer for details

SERVICE

Fisher is committed to providing you, our valued customer, with superior service. Each and every instrument is rigidly tested and carefully inspected during assembly and before shipment. Should you have any questions or problems, contact:

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